Name: Rachel Fischhoff Grade: 5 Date: March 27, 2012

Angles on a Line

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| Lesson Sources: Singapore 12.1 |
| Lesson Objectives: Students will be able to improve protractor proficiency by measuring angles on a line |
| Standards: |
| Multicultural Content: |
| Materials and Advanced Preparation: Release work from Singapore (maybe blow it up on the copier), protractors |
| Prior Knowledge and Skills Needed: yesterday’s knowledge of angles, rays, etc. |
| Key/New Vocabulary: Angle, Ray, Vertex/Vertices, Line |

Lesson Procedure: Part One

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| **Time** | **Teacher Actions** | **Student Learning Activities** | **Form of Assessment** |
| 1 min | **1. Connection**   * Mathematicians, yesterday we explored angles. We labeled their parts. We used protractors to measure them. * Today, we are going to continue working with angles and protractors to continue adding to our angle-knowledge. | Explain purpose of mini-lesson |  |
| 10 min max | **2. The Teaching (The Giving of Information):**   * Yesterday, we were able to add a lot of information to these slides. Today, I want to add in new information by using my protractor. * Model: Okay…hmmm, first I want to line up my center point with the vertex of my angle. Ok. Then I want to make sure one ray is lined up with zero degrees. Then I want to go up my protractor until I hit this next ray. Got it. 90 degrees. That makes sense based on what we know about right angles. * Now let’s try a few where we don’t know the exact angle without measuring. * (Go through a few examples) | * What will students do to take in the information? | * How will you know what students taking in? |
|  | **3. Have-A-Go (optional)**   * Students try, or coach me through, one or two up on the board. * Pass out the work, try one on the rug. | How will students be actively involved?  By:   * Practicing the mini-lesson * Partner Talk * Planning their day’s work | * How will you assess students’ understanding of the teaching? * How will you give feedback? |
| **Anticipated Responses/Outcomes:**   * One major source of confusion has to do with what side of the protractor to use—which degrees. Some students will need more guidan | | | |
|  | **4. The Link**  Today when you return to your desks, you will use your protractors to measure angles on a line. | **(Workshop Time)**   * What will students go off and do to apply the teaching? * Will students select what strategy or * teaching they want to apply (self determination)? | * How will you know what strategy or teaching students are applying? * What will you record during the conferencing? * Which students will you conference with today? |
|  | **5. Closing (at the share)**  Use close to get students to come up with preliminary rules of protractors—first, then, then, then, finally. Record on last slide. | * What are students going to share/ respond to? * How many students will share? * How will you determine who shares? | * How will you assess the application of the concept during the workshop time? * How will you communicate to the students what they accomplished today? |
| **Anticipated Responses/Outcomes:**   * Students will feel more comfortable with protractors and more ready to articulate their use. | | | |

**Reflections:**

How did the lesson plan work? What was effective? What did you learn? What would you change for tomorrow or the next time you will use this plan?